

ABSTRACT OF THE DISCLOSURE

A protecting apparatus includes a back-flow preventing Zener diode having a cathode connected directly to a control terminal of a main transistor formed on a semiconductor substrate. A protecting transistor has an output terminal connected to an anode of the back-flow preventing Zener diode and an input terminal connected to an input terminal of the main transistor. A protecting capacitor or Zener diode circuit is connected between a control terminal of the protecting transistor and the input terminal of the main transistor for allowing initial surge current, when caused based on a rapid surge, to flow into the control terminal of the protecting transistor. The protecting transistor, when turning on in response to the initial surge current, allows next surge current succeeding the initial surge current to flow into the control terminal of the main transistor via the back-flow preventing Zener diode. And, the main transistor, when turning on in response to the next surge current, allows late surge current succeeding the next surge current to flow therethrough.